UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VII
901 NORTH 5TH STREET
KANSAS CITY, KANSAS 66101

MAY 17 2000

MEMORANDUM

SUBJECT: Transmittal of Inspection Report - RCRA

FROM: Betty Berry, Branch Chief,
ARCM/ENSV

TO: Jo Ann Heiman
Branch Manager
RESP/ARTD

This memorandum transmits the following inspection report conducted by the Environmental Services Division:

Type of Inspection: CEI	Inspection Date: 4/25/00
Inspector: Dave Whiting	
Facility Name: McDonnell Douglas Corporation, Tract 1	Facility I.D. Number: RCRA MOD000818963
Address: McDonnell & Lindbergh Blvd., St. Louis, MO 63042	Activity Number:
Facility Activity: manufactures fighter aircraft	SIC Code: 3721
Multimedia: 1) Was a screening checklist completed? yes 2) Was this inspection part of a Level C/D Multimedia Inspection? no Other participating programs: Environmental Justice: Was inspection conducted in a potential EJ Area (per MM screening checklist)? No Small Business Regulatory Enforcement Fairness Act (SBREFA): Was information provided? Yes	
Preliminary Findings (list potential regulatory deficiencies):	NOV/NOPF Issued? no Potential SNC? no
Comments:	

Attachments

REPORT OF RCRA COMPLIANCE INSPECTION

At

McDONNELL DOUGLAS, CORPORATION TRACT 1
McDONNELL & LINDBERGH BLVD.
ST. LOUIS, MO 63042
Phone No.: (314)232-3319
EPA I.D. NUMBER: MOD000818963

On

April 25th, 2000

By

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION VII
Environmental Services Division

INTRODUCTION

At the request of the Air, RCRA and Toxics Division (ARTD), a RCRA Subpart CC inspection (CCI) was performed at MDCT1 in St. Louis, MO on April 25th, 2000. The CCI was conducted under the authority of Section 3007 of the Resource Conservation and Recovery Act (RCRA), as amended. The inspection was a Level B Multi-Media Inspection. A Multi-Media Screening checklist is attached to this report (attachment 1). A Missouri notification and waste stream information sheet is also attached to this report (attachment 2). This narrative report and attachments present the results of the CCI.

Participants

McDonnell Douglas Corp. Tract 1 (MDCT1):
Bryan Kury, Manager, Env. & Hazardous Materials Services (EHMS)
Joseph Haake, Group Mgr., Waste Mgmnt. & Env. Compliance, EHMS
Angela Pierce, Group Mgr., Air, EHMS
Stephen Hecht, Env. Scientist, EHMS

U.S. Environmental Protection Agency (EPA):
David N. Whiting, Environmental Engineer

Inspection Procedure

Upon arrival at MDCT1, I contacted Mr. Kury and presented him my credentials. I explained the purpose and procedure of the CCI to Mr. Kury and Mr. Haake and discussed the confidentiality of business information with them. At the end of the inspection, an exit

interview was held with Mr. Kury and Mr. Haake. During the exit interview, Mr. Kury acknowledged receipt of the following by his signature: a RCRA Inspection Confidentiality Notice form and a Receipt for Documents (attachments 3-4). No claim of confidentiality was made at the time of the CCI.

Facility Description

MDCT1 manufactures fighter aircraft for the armed services. Unit operations are: metal forming, machining, compositing, painting and assembly. There is also a wastewater treatment plant on-site which discharges treated effluent to the St. Louis Metro Wastewater District.

MDCT1 is located on a site which is about 300 acres in size and is adjacent to Lambert Airfield (attachment 5). There are multiple buildings at the facility, with a total floor space of about 4,000,000 ft^2; about 750,000 ft^2 are owned by the Navy. MDCT1 is located in an area which appears zoned for industrial and commercial use. There are 5,765 employees staffing operations two shifts per day and 5 days per week, with a small staff on third shift.

FINDINGS AND OBSERVATIONS

MDCT1 is a large quantity generator of hazardous waste (LQG), and stores the waste in containers. The operators of the MDCT1 facility received a Permit to store hazardous waste in containers, effective 3/5/97.

Hazardous Wastes Containing Volatile Organic Compounds

Mr. Haake said the hazardous wastes which contain volatile organic compounds (VOCs) are generated from parts cleaning and painting operations. Mr. Haake said the solvents in use are methyl ethyl ketone, methyl propyl ketone and some 1,1,1 trichloroethane.

Mr. Haake said all the hazardous wastes with VOCs are considered to be in light liquid service and have a volatile organic concentration >500ppmv (attachment 10 pg. 19).

Management of Containers

Mr. Haake said liquid hazardous wastes with VOCs are accumulated and stored in DOT approved containers, meeting Level 1, Option 1 requirements.. All the 55-gallon containers I observed in the permitted storage area appeared to be DOT approved containers and no detectable emissions above background levels were indicated by measurement with a Foxboro OVA-108 flame ionization detector (OVA).

Mr. Haake said all solvent contaminated wipes and debris are accumulated in 2-yd^3 containers and then transferred to one of two 40-yd^3 roll-off containers.

Mr. Haake said the 40-yd^3 roll-off containers meet DOT specifications and are managed under Level 2, Option 1 requirements. The roll-off containers have an attached hydraulic compactor. No detectable emissions above background levels were indicated by measurement with the OVA at the two roll-off containers (attachment 10 pg. 25). The operators of MDCT1 performed air monitoring at the roll-off containers in June 1999 (attachment 6).

Mr. Haake said the 2-yd^3 containers are managed under Level 2, Option 2 requirements. Mr. Haake said he thinks there are about 12, 2-yd^3 containers in use at MDCT1. Air monitoring for VOC emissions was conducted by MDCT1 personnel on some 2-yd^3 containers used to accumulated solvent contaminated wipes and debris, in June and July of 1999 (attachment 7). I monitored 10 2-yd^3 containers with the OVA during this CCI (attachment 10 pg. 25). Six of the 10 containers which I monitored were not included on the June-July 1999 monitoring conducted by MDCT1 personnel. Mr. Haake said that in April 1998, they had an outside contractor monitor a typical 2-yd^3 containing hazardous waste with VOCs (attachment 8). Mr. Haake said the purpose of that monitoring was to show that all the containers could achieve "no detectable emissions" (i.e. <500ppmv). I told Mr. Haake that it may be necessary to document "no detectable emissions" for each 2-yd^3 container which will be used.

The lids on the 2-yd^3 containers will develop some deformation with use, over time. This is because the lids on these containers will be subjected to uneven loadings and stresses during normal use. Normal use will include the lids being lifted and perhaps being held up at a corner when waste is placed inside the containers. The lids may also be bumped by equipment when the contents of the 2-yd^3 containers are dumped into a 40-yd^3 roll-off container.

One of the 10 2-yd^3 containers I monitored (box #088) had VOC's emissions >500ppmv (attachment 10 pg. 25). I told Mr. Haake and Mr. Kury that an initial attempt to eliminate the leak should occur within 24 hours and that a final remedy should be achieved within five days. Mr. Haake said they would most likely remove the unit from service until repairs can be affected.

Inspections of hazardous waste storage and accumulation areas are conducted by MDCT1 personnel. Mr. Haake said they also do quarterly audits of hand wipe generation areas and he gave me a copy of an audit log (attachment 9).

Summary

No violations were cited. We discussed the need to repair the leaking container. I requested they contact to Edwin Buckner, ARTD/RESP, with a description of the repair efforts. I also discussed with Mr. Haake that it may be necessary to document that each 2-yd^3 container being used has been monitored for "no detectable emissions".

David N. Whiting
Environmental Engineer
Date: 5/6/00

Attachments

1. Region VII Multi-Media Screening Checklist (1 2-sided page)
2. MDNR Notification and Waste Stream Information sheet
3. Inspection Confidentiality Notice form
4. Receipt for Documents
5. Facility diagram
6. Roll-off container monitoring, 6/99
7. 2-yd^3 container monitoring, 6-7/99 (3 pages)
8. Contractor monitoring of a typical 2-yd^3 container (2 pages)
9. Hand wipe audit log, typical (2 pages)
10. Inspection data gathering sheets (27 pages)

Forward To: EJ ☐ TSCA/EPCRA ☑ CWA ☐ Wetlands ☐ UIC ☐ PWS ☐ CAA ☑ CFC ☐ RCRA ☐ UST ☑ SPCC ☐

REGION VII MULTIMEDIA SCREENING CHECKLIST

Facility McDonnel Douglas Corp T1 Facility Ownership private & part Navy
Street McDonnel & Lindbergh Blvd. Facility Contact Joseph Haake
City St. Louis MO Phone (314) 232-3319 SIC code 3721
State MO Zip 63042 Number of Employees 5,765 Work Hours/Shifts ~2s/d + 5d/w

Inspector David Whiting
Primary Media RCRA
Inspector Phone Ext. (319) 338-6954
Date 4/25/00

1. What does the facility do? manufacture fighter aircraft
2. Provide a brief process description: metal forming, machining, compositing, painting, assembly

(Check all that apply): Painting/Coating (Water-based ☑, Solvent-based ☐); Printing ☐; Reacting ☐; Formulating ☐; Distilling ☐; Parts Washers/Degreasing (Water-based ☑, Halogenated-based ☑, Non-halogenated-based ☐); Combustion (boiler, furnaces, oxidizers) ☐; Electroplating (Chrome ☑, Other cr & cad); Electro-less plating(Type _____)

ENVIRONMENTAL JUSTICE (EJ - Note: Only forward to EJ if a concern is also identified in one of the regulatory areas below)

1. Is the facility located in a low income area (e.g., with many abandoned and dilapidated properties)? No ☑ (stop) Yes ☐
   ☞ Is the facility located less then 1000 feet from the nearest routinely occupied property (house, school, etc.)? No ☑ Yes ☐ → ***Forward to EJ***

TOXIC SUBSTANCES CONTROL ACT (TSCA) EMERGENCY PLANNING & COMMUNITY RIGHT TO KNOW ACT (EPCRA)

1. Does the facility use more than 200 gallons or 1,500 pounds per month of the following (check all that apply): Acids ☑, Anhydrous Ammonia ☐, Chlorine ☐, Chlorinated Solvents ☑, Solvent-Based Paints ☑, or Solvents ☑? No ☐ (stop) Yes ☐ (Available on Envirofacts)
   ☞ Have Toxic Chemical Release Forms (Form R) been submitted under Section 313 of EPCRA? Yes ☑ No ☐ → ***Forward to TSCA***
2. Does the facility store more than 100 gallons or 1,000 pounds of the following (check all that apply): Acids ☑, Bases ☑, Bulk Chemicals ☑, Anhydrous Ammonia ☑, Chlorine ☐, Chlorinated Solvents ☑, Fuels ☑, Gases ☐, Solvent-Based Paints ☑, or Solvents ☑? No ☐ (stop) Yes ☐
   (no ammonia now) (no chlor solvents storage > threshold now)
   ☞ Have Hazardous Chemical Inventory Forms (Tier II) been submitted to local and state governments (Emergency Planning Committees or State Emergency Response Commission)? Yes ☑ No ☐ → ***Forward to EPCRA*** (Available on Envirofacts)
   ☞ Have Risk Management Plans been submitted to EPA under Section 112r of the CAA? Yes ☑ No ☑ → ***Forward to EPCRA*** Bryan Kury said they are under threshold.
3. Does the facility have any equipment that contains PCB's at concentrations >500 ppm? No ☑ (stop) Yes ☐
   ☞ Do you see any visibly leaking equipment(including wet or weeping equipment)? No ☐ Yes ☐ → ***Forward to TSCA*** (*Get Photo*)

CLEAN WATER ACT (CWA) - National Pollution Discharge Elimination System (NPDES), Industrial Pretreatment

1. Does the facility discharge any water to storm sewers, surface water, or the land? No ☐ (stop) Yes ☑
   ☞ Are all of the water discharges permitted? Yes ☑ No ☐ → ***Forward to CWA***
2. Does the facility discharge process wastewater to the city POTW (Publically Owned Treatment Works)? No ☐ (stop) Yes ☑ from on-site WW TP
   ☞ Are the discharges permitted by: The state? ☐ (Stop here) The city? ☑ No ☐ → ***Forward to CWA;***
   ☞ Does the city have a state or EPA approved pretreatment program? Yes ☑ No or Don't Know ☐ → ***Forward to CWA***
3. Do you see any wastewater discharges not identified by the facility? No ☑ (stop) Yes ☐ Location: _____ _____ Appearance of discharge: _____ (*Get Photo*) → ***Forward to CWA***

CLEAN WATER ACT (CWA) - Section 404 Wetlands

1. Does the facility have any wetland areas (e.g. streams, ponds, or temporarily wet areas)? No ☑ (stop) Yes ☐
   ☞ Do you see any areas that have been filled, dredged, channelized, dammed, or had gravel removed from within the last 5 years? No ☑ Yes ☐ → ***FWD to Wetlands*** When? _____ Location: _____ (*Get Photo*)

SAFE DRINKING WATER ACT (SDWA) - Underground Injection Control (UIC) & Public Water System (PWS)

1. Does the facility discharge any liquids to the subsurface (septic systems, disposal wells, cesspools, etc.)? No ☑ (stop) Yes ☐ → ***Forward to UIC***
   ☞ Do these liquid wastes consist of sanitary wastewater only? Yes ☐ No ☐ → ***Forward to UIC***
2. Does the facility provide drinking water to 25 people or more from its own source (private well, river, pond)? No ☑ Yes ☐ → ***Forward to PWS***
   ☞ Does the facility test or monitor its drinking water in order to comply with state regulations? Yes ☐ No ☐

pnw

Notification And Waste Stream Information

Epa ID *MOD000818963* ***Missouri ID*** *001001* ***Facility Status*** *Large Quantity*

Date EPA Id Issued *06/30/1980*

Company Name *MCDONNELL DOUGLAS CORP TRACT 1*

Facility Address *MCDONNELL & LINDBERGH BLVD*

HAZELWOOD, MO 63042 ***County*** *ST LOUIS COUNTY*

Latitude Decimal Format *38.788500* ***Longitude Decimal Format*** *-90.3829*

Method Of Collection *Zip Code Centroid* ***Collection Site***

Mailing Address *PO BOX 516 MAIL CODE ~~S111-1099~~ S221-1400*

ST LOUIS, MO 63166

Contact Person/Position *JOSEPH HAAKE* ***Phone Number*** *(314) 232-3319*

Facility Owner *MCDONNELL DOUGLAS CORP*

Facility's Owner Address

Owner's Phone Number ***Owner Type*** *Private*

Property Owner's Name

Propety Owner's Address

Property Owner's Phone Number ***Property Owner Type*** *Private*

SIC Code *3721*

☑ ***TSD Facility*** ***TSD Identification Number:*** HH1013 ☐ ***Generator/Facility Information is Confidential***

RCRA Identification Number: RR268A

Registered EPA Hazadous Waste Numbers

D000	D001	D002	D003
D004	D005	D006	D007
D008	D009	D010	D011
D018	D027	D035	D039
D040	D098	F001	F002
F003	F005	F006	F007
F008	F019	P030	P098
U134	U151	U162	U210
U223	U382		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
CONFIDENTIALITY NOTICE

Facility Name McDonnell Douglas Corp. Tract I	
Facility Address McDonnell & Lindbergh Blvd. Hazelwood, MO 63042	
Inspector (print) David M. Whiting	
U.S. EPA, Region VII, 901 N. 5th St., Kansas City, KS 66101	Date 4/25/00

The United States Environmental Protection Agency (EPA) is obligated, under the Freedom of Information Act, to release information collected during inspections to persons who submit requests for that information. The Freedom of Information Act does, however, have provisions that allow EPA to withhold certain confidential business information from public disclosure. To claim protection for information gathered during this inspection you must request that the information be held CONFIDENTIAL and substantiate your claim in writing by demonstrating that the information meets the requirements in 40 CFR 2, Subpart B. The following criteria in Subpart B must be met:

1. Your company has taken measures to protect the confidentiality of the information, and it intends to continue to take such measures.

2. No statute specifically requires disclosure of the information.

3. Disclosure of the information would cause substantial harm to your company's competitive position.

Information that you claim confidential will be held as such pending a determination of applicability by EPA.

I have received this Notice and DO NOT want to make a claim of confidentiality at this time.	
Facility Representative Provided Notice (print)	Signature/Date
Bryan E. Kung	Bry E. King 4/25/00

I have received this Notice and DO want to make a claim of confidentiality.	
Facility Representative Provided Notice (print)	Signature/Date

Information for which confidential treatment is requested;

(Rev: 11/15/99)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RECEIPT FOR DOCUMENTS AND SAMPLES

Facility Name	McDonnell Douglas Corp. Tract I
Facility Address	McDonnel & Lindbergh Blvd. Hazelwood, MO 63042

Documents Collected? YES ✓ (list below) NO___

Samples Collected? YES___ (list below) NO ✓   Split Samples: YES___ NO___

Documents/Samples were: 1)Received no charge ✓ 2)Borrowed___ 3)Purchased___

Amount Paid: $____________ Method: Cash___ Voucher___ To Be Billed___

The documents and samples described below were collected in connection with the administration and enforcement of the applicable statute under which the information is obtained.

===

Receipt for the document(s) and/or sample(s) described below is hereby acknowledged:

1) Facility diagram
2) Certification of nondetectable emission for 4 containers
3) Dempster CC inspection, 6/7/99, (3 pages)
4) Container VOC emission 4/3/98 one box, (2 pages)
5) Observation audit, 3/13/00 (2 pages)

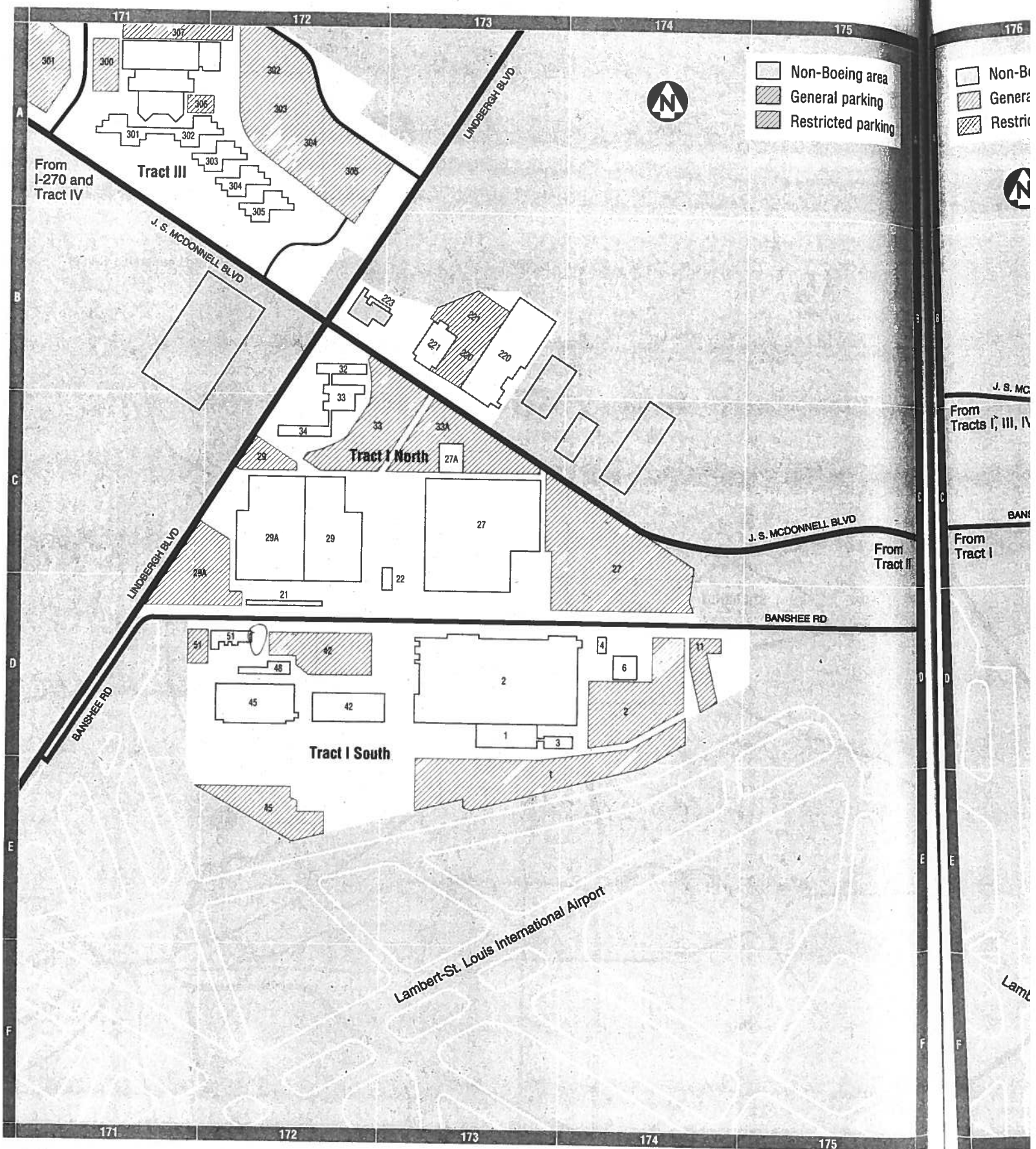
Facility Representative (print) BRYAN E. KURY	**Signature/Date** Bryan E. Kury 4/25/00
Inspector (print) David N. Whiting	**Signature/Date** David N. Whiting 4/25/00

U.S.EPA, Region VII, ENSV Division, 25 Funston Road, Kansas City, KS 66115

(rev:1/20/93)

Missouri – St. Louis

Tract I, North and South



Revised 3-00

5-1

Revised 3-0

Certification of no detectable emissions

On June 23, 1999, VOC air emission testing of the hazardous solid waste container/compactor units, located at Buildings 27, 51, 101, and 598, was conducted to document compliance with subpart CC requirements for level 2 containers. The testing was performed by Elmer Dwyer and Joe Haake of the Boeing-St. Louis Environmental and Hazardous Materials Services Department.

A direct reading PE Photo Vac Model 2020 Photoionizing Detector (PID), calibrated using 100 ppm isobutylene, was utilized to detect total VOCs. The sampling was conducted in accordance with procedures specified in Method 21 of 40 CFR part 60, appendix A.

Samples were taken along the edge of the gasket where the compactor ram enters the waste storage container and along the sides of the container where it attaches to the compactor unit. The results are as follows:

Building 27 compactor

Ram gasket	0.7 ppm
South side	0.0 ppm
North side	39.0 ppm

Building 51 compactor

Ram gasket	52.0 ppm
West side	0.0 ppm
East side	25.0 ppm

Building 101

Ram gasket	0.0 ppm
South side	0.0 ppm
North side	0.0 ppm

Building 598

Ram gasket	0.0 ppm
South side	0.0 ppm
North side	0.0 ppm

The results indicated that the emission levels are below 500 ppm specified in 40 CFR 265.1084(d)(8).

Elmer Dwyer Joe Haake

ANNUAL DUMPSTER INSPECTION

40 CFR 264 subpart CC

DUMPSTER #	TEST DATE	RESULTS (PPM)	NOTES	SIGNATURE
1	6-23-99	19.2		Joe Hoake
2				
3	7-14-99	510	LIDS BENT. PULLED OUT OF SERVICE 7-14-99	Joe Hoake
4				
5				
6				
7				
8				
9				
10				
11	7-14-99	33	LIDS BENT UP ON SIDES	Joe Hoake
12				
13	7-15-99		OUT OF SERVICE	Joe Hoake
14				
15	6-23-99	64		Joe Hoake
16	6-23-99	102		Joe Hoake
17				
18				
19	7-14-99	12		
20	7-14-99	149	HIGH LEVEL AT RIGHT LID OUTSIDE	Joe Hoake
21				
22	7-14-99	72		Joe Hoake
23				
24				
25				
26				
27				
28				
29	7-14-99	184		Joe Hoake
30				
31				
32	7-14-99	159	OUT SIDE OF RIGHT LID	Joe Hoake
33				
34	6-23-99	34		Joe Hoake
35	7-15-99		OUT OF SERVICE	Joe Hoake
36				

ANNUAL DUMPSTER INSPECTION

40 CFR 264 subpart CC

DUMPSTER #	TEST DATE	RESULTS (PPM)	NOTES Pulled out of service 7/14	SIGNATURE
37	7-14-99	692	HIGH LEVEL AT FRONT BETWEEN LIDS. ALSO 675, 516 AT R. LID OUTSIDE.	Joe Haake
38				
39				
40				
41				
42				
43				
44				
45				
46				
47	7-15-99		OUT OF SERVICE	Joe Haake
48	7-15-99		OUT OF SERVICE	Joe Haake
49				
50	7-14-99	189	HIGH LEVEL AT OUTSIDE CORNER OF RIGHT LID	Joe Haake
51				
52	7-14-99	296	HIGH LEVEL BETWEEN LIDS AT BACK	Joe Haake
53	7-14-99	56		Joe Haake
54				
55				
56	7-14-99	0		Joe Haake
57				
58	7-14-99	114	METAL PIECE BETWEEN LIDS BENT	Joe Haake
59				
60				
61				
62	7-14-99	135	HIGH LEVEL BETWEEN LIDS AT FRONT.	Joe Haake
63				
64	6-23-99	480	LEVELS OF 480, 223, AND 176 AT FRONT OF LEFT LID.	Joe Haake
65				
66				
67	7-14-99	0		Joe Haake
68				
69				
70	7-14-99	160	HIGH LEVEL AT SIDE OF LEFT LID	Joe Haake
71				
72	7-14-99	118		Joe Haake

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ANNUAL DUMPSTER INSPECTION
40 CFR 264 subpart CC

DUMPSTER #	TEST DATE	RESULTS (PPM)	NOTES	SIGNATURE
73				
74				
75	7-15-99		OUT OF SERVICE	Joe Haake
76				
77	7-15-99		OUT OF SERVICE	Joe Haake
78	7-14-99	>1000	HIGH LEVEL BETWEEN LIDS AT FRONT, PULLED OUT OF SERVICE 7-14-99	Joe Haake
79	7-15-99		OUT OF SERVICE	Joe Haake
80				
81				
82	7-14-99		OUT OF SERVICE	Joe Haake
83				
84	7-15-99		OUT OF SERVICE	Joe Haake
85	7-14-99	47		Joe Haake
86				
87				
88	7-15-99		OUT OF SERVICE	Joe Haake
89				
90	7-15-99		OUT OF SERVICE	Joe Haake
91	7-15-99		OUT OF SERVICE	Joe Haake
92	7-15-99		OUT OF SERVICE	Joe Haake

WELLINGTON ENVIRONMENTAL

www.environmentalcare.com

HEADQUARTERS:
ST. LOUIS, MISSOURI

OFFICES IN:
TAMPA, FLORIDA
WICHITA, KANSAS
DAVENPORT, IOWA

April 30, 1998

J. H. said this is a Tract II container. DNW

Elmer Dwyer
Senior Specialist
Environmental & Hazardous
Materials Services
The Boeing Company
P.O. Box 516 MS S111-1099
St. Louis, Missouri 63166

RE: Determination of Volatile Organic Compound (VOC)
Air Emission From Hazardous Waste Container

Dear Elmer:

Thank you for allowing Wellington Environmental the opportunity to perform the VOC air emission testing of the hazardous waste container. This report is based upon air sampling and visual observations.

The following contains a summary of the air sampling performed on April 30, 1998 at the above referenced location.

A calibrated direct reading Thermo Environmental OVM (Organic Vapor Meter) Model 580 Photoionizing Detector (PID) was utilized to detect total VOCs. The sampling was conducted following the procedures specified in Method 21 of 40 CFR part 60, appendix A.

Results of the air sampling indicated an ambient background level of approximately 1 part per million (ppm) within 1 meter of the container. The sample was collected upwind of the container. Results of the sampling collected around the perimeter of the cover indicated a range of 1 - 248 ppm (see attached drawing indicating sampling results and locations). The two (2) highest readings were observed at the corners of the container. These readings indicate that the difference between the background concentration (1 ppm) and the maximum concentration (248 ppm) are below 500 ppm specified in 40 CFR section 265.1084(d)(8).

Please call if you have any questions concerning the enclosed information at (314) 644-4930.

Sincerely,
WELLINGTON ENVIRONMENTAL

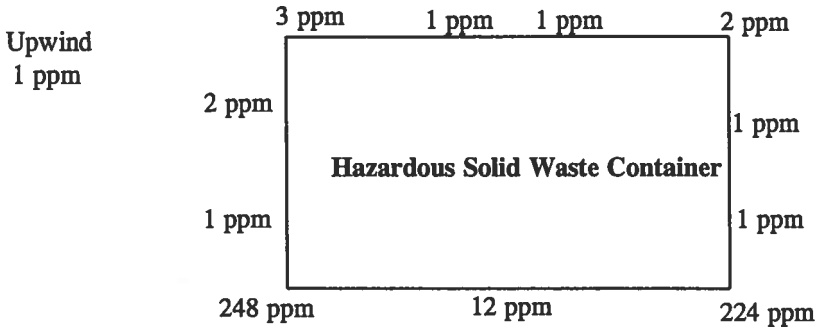
John J. Maurer

John J. Maurer, CIH
Director, Industrial Hygiene Services

607 Hanley Industrial Court • St. Louis, MO 63144 • (314) 644-4930 Fax: (314) 644-6744

8-1

WELLINGTON
ENVIRONMENTAL



Not to Scale

8-7

ANESHAP HANDWIPE OBSERVATION AUDIT — QUARTERLY

1	AUDITOR	Yvonne Pierce	A Y Pierce	A Y Pierce	A Y Pierce
2	DATE	3-13-00	3-13-00	3-13-00	3-13-00
3					
4					
5					
6	BUILDING	29A	29A	29A	29A
7	LOCATION	12A	L10	1116	
8	ARE OPERATORS USING COMPLIANT SOLVENT FOR HANDWIPE CLEANING OPERATIONS? (e.g. DS 108, DESOCLEAN 45, ISOPROPYL ALCOHOL, MPK, MP 1793, PF DEGREASER, SHOPMASTER RC)	(YES) NO NA	(YES) NO NA	(YES) NO NA	(YES) NO NA
9	ARE EXEMPT HANDWIPE CLEANING OPERATIONS USING THE EXEMPT SOLVENTS FOR THE EXEMPTED OPERATIONS ONLY? (IF NO EXEMPT OPERATIONS ARE PERFORMED IN THE AREA INDICATE NA)	YES NO (NA)	YES NO (NA)	(YES) NO NA	(YES) NO NA
10	ARE HANDWIPE CLEANING RAGS BEING DEPOSITED INTO APPROPRIATE CLOSED CONTAINERS (e.g., RED HAZARDOUS WASTE CANS) AFTER EACH HANDWIPE CLEANING OPERATION?	(YES) NO NA	(YES) NO NA	(YES) NO NA	(YES) NO NA
11	ARE LIDS TO RED HAZARDOUS WASTE CONTAINERS BEING KEPT CLOSED?	(YES) NO NA	(YES) NO NA	(YES) NO NA	(YES) NO NA
12	IF FLUSH CLEANING IS PERFORMED ON AEROSPACE PARTS, ASSEMBLIES OR COMPONENTS, IS THE CLEANING SOLVENT COLLECTED INTO AN ENCLOSED CONTAINER OR COLLECTION SYSTEM THAT IS KEPT CLOSED WHEN NOT IN USE, OR INTO A SYSTEM WITH EQUIVALENT EMISSION CONTROL?	YES NO (NA)	YES NO (NA)	YES NO (NA)	YES NO (NA)
13	Bldg 29 audited the bldg via walk through. Did not observe any non-compliant activities	YES NO NA	YES NO NA	YES NO NA	YES NO NA
14		YES NO NA	YES NO NA	YES NO NA	YES NO NA
15		YES NO NA	YES NO NA	YES NO NA	YES NO NA
	EIQ NO				
	UNIT NO				
	NOTES/CORRECTIVE ACTIONS (INCLUDE TIME AND DATE CORRECTIVE ACTIONS ARE	PUT NOTES AND CORRECTIVE ACTIONS ON THE BACK OF THE AUDIT SHEET.			
	SIGNITURE/DATE				
	NOTE IF AN AWARD OR NOTICE WAS GIVEN				

FOR ITEMS 1-7 LOG THE REQUESTED INFORMATION. FOR ITEMS 8-15 CIRCLE YES OR NO TO THE LISTED QUESTIONS. EXPLANATIONS TO THE NOs ALONG WITH SUPERVISOR AND DEPARTMENT SHOULD BE PROVIDED UNDER THE NOTES/CORRECTIVE ACTIONS WHICH SHOULD BE PUT ON THE BACK OF THE SHEET.

9-1

SHAP HANDWIPE OBSERVATION AUDIT — QUARTERLY

	AUDITOR	Yvonne Pierce	Yvonne Pierce		
2	DATE	3-13-00	3-13-00		
3					
4					
5					
6	BUILDING	27	27		
7	LOCATION	Paint Shop	23X		
8	ARE OPERATORS USING COMPLIANT SOLVENT FOR HANDWIPE CLEANING OPERATIONS? (e.g. DS 108, DESOCLEAN 45, ISOPROPYL ALCOHOL, MPK, MP 1793, PF DEGREASER, SHOPMASTER RC)	(YES) NO NA	(YES) NO NA	YES NO NA	YES NO NA
9	ARE EXEMPT HANDWIPE CLEANING OPERATIONS USING THE EXEMPT SOLVENTS FOR THE EXEMPTED OPERATIONS ONLY? (IF NO EXEMPT OPERATIONS ARE PERFORMED IN THE AREA INDICATE NA)	YES NO (NA)	YES NO (NA)	YES NO NA	YES NO NA
10	ARE HANDWIPE CLEANING RAGS BEING DEPOSITED INTO APPROPRIATE CLOSED CONTAINERS (e.g., RED HAZARDOUS WASTE CANS) AFTER EACH HANDWIPE CLEANING OPERATION?	(YES) NO NA	(YES) NO NA	YES NO NA	YES NO NA
11	ARE LIDS TO RED HAZARDOUS WASTE CONTAINERS BEING KEPT CLOSED?	(YES) NO NA	(YES) NO NA	YES NO NA	YES NO NA
12	IF FLUSH CLEANING IS PERFORMED ON AEROSPACE PARTS, ASSEMBLIES OR COMPONENTS, IS THE CLEANING SOLVENT COLLECTED INTO AN ENCLOSED CONTAINER OR COLLECTION SYSTEM THAT IS KEPT CLOSED WHEN NOT IN USE, OR INTO A SYSTEM WITH EQUIVALENT EMISSION CONTROL?	YES NO (NA)	YES NO (NA)	YES NO NA	YES NO NA
13	Walked through the rest of Bldg 27 - no compliance issues visible.	YES NO NA	YES NO NA	YES NO NA	YES NO NA
14		YES NO NA	YES NO NA	YES NO NA	YES NO NA
15		YES NO NA	YES NO NA	YES NO NA	YES NO NA
	EIQ NO				
	UNIT NO				
	NOTES/CORRECTIVE ACTIONS (INCLUDE TIME AND DATE CORRECTIVE ACTIONS ARE	PUT NOTES AND CORRECTIVE ACTIONS ON THE BACK OF THE AUDIT SHEET.			
	SIGNITURE/DATE				
	NOTE IF AN AWARD OR NOTICE WAS GIVEN				

FOR ITEM 1-7 LOG THE REQUESTED INFORMATION. FOR ITEMS 8-15 CIRCLE YES OR NO TO THE LISTED QUESTIONS. EXPLANATIONS TO THE NOs ALONG WITH SUPERVISOR AND NT SHOULD BE PROVIDED UNDER THE NOTES/CORRECTIVE ACTIONS WHICH SHOULD BE PUT ON THE BACK OF THE SHEET.

DATA GATHERING WORKSHEET AND CHECKLIST INSTRUCTIONS AND KEY

1. Complete all items on the applicable data gathering worksheet and checklist in a neat and legible fashion.

   a. Additional time spent legibly completing the forms in the field will reduce the need to rewrite the forms or explain the forms in the inspection report.

2. All responses will be based on the inspector's knowledge and best judgement at the tim of the inspection.

3. A (✓) mark should be used to mark the all boxes (☐) and will indicate the choice made or the action completed.

4. The Records Review Worksheet and Checklists and the Visual Review Worksheet and Checklists each have a key below the tables. Use this key when filling out these forms.

   a. Items which are shaded gray on the worksheets and checklists are considered high priority items during inspections and should always be completed.

   b. On the top of the worksheets and checklists are a group of boxes which represent the generator status of the facility and whether or not the facility is subject to interim status or permit requirements. The appropriate box should be checked.

5. Several of the forms contain the following box at the bottom of the page:

DOCUMENTATION: ***HOW*** **are the facts known?** ***WHO*** **said what?** ***WHEN*** **did it happen?** ***HOW long did it happen?*** **and** ***WHAT PROOF WAS OBTAINED?***

The inspector should pay special attention to the questions contained in this box and mak sure that they are able to answer them as relates to inspection documentation.

6. Each of the forms has a form number in the bottom left corner of the form and each ite on the form is numbered and/or lettered. The form and item number/letters should be used when referencing information contained on the form in the inspection report.

7. Each of the forms has a space in the upper left hand corner of the form to track the information by activity number. Place the inspection activity number in the space provided.

8. Each of the forms has a space in the upper right hand corner of the form to track the total number of pages used during the inspection. Count all forms used and complete this space.

9. The rest of the information on the forms is self-explanatory.

Attachment 10

Activity #: _____ Page ___ of ___

PRE-INSPECTION WORKSHEET

GENERAL INFORMATION

1. Facility Name: McDonnel Douglas Corp Tract 1
2. Inspection Date: 4/25/00
3. Facility Address: McDonnel & Lindbergh Blvd. St Louis, MO 63042
4. EPA I.D. #: MOD000818963
5. State I.D. #: _____
6. Location Information: _____
7. Facility Contact: Joseph Haake Phone #: (314) 232-3319
8. Inspector Name/Title: David M Whiting Phone #: (314) 338-6959
9. Inspection Type: ☐ SQG ☐ LQG ☐ TSD ☑ Other Inspection #: RCRA Air regs, CCI

//

TRAVEL INFORMATION

Dates of Travel: 4/24-26/00 ☑ GOV ☐ POV

Date	Hotel	Phone #	Rate
_____	_____	( )____-_____	_____
_____	_____	( )____-_____	_____
_____	_____	( )____-_____	_____

Additional inspection conducted during this trip? ☐ YES ☑ NO

Where: _____

Compensatory time requested? ☐ YES ☐ NO # of hours: _____ Dates: _____

Overnight vehicle requested? ☐ YES ☐ NO

Car signed out? ☐ YES ☐ NO Vehicle #: _____

NOTE: Provide a copy of this page for the secretary and mark the copy → ☐ Secretaries Copy

//

CONTACTS

10. Compliance Officer/Phone # : Edwin Buckner (913) 551-7621
11. State Contact/Phone #/ ☐ N/A : _____
    Location _____
12. Permit Writer/Phone # ☐ N/A : _____
13. Attorney/Phone # ☐ N/A : _____
14. Other Contacts/Phone # ☐ N/A : _____

Activity #: _____ Page ___ of ___

KEY INFORMATION FROM FILE REVIEW

15. Date of last inspection: Sept. 96 ☐ Not previously inspected

16. Key information from last inspection:
(operations, waste streams/codes, waste management processes,etc.)

17. Compliance/Administrative issues from last inspection:

18. Most recent notification copied: ☑ YES ☐ NO

19. Key Interim Status information: ☐ N/A
(container/tank storage limits, etc.)

Key Permit Information: ☐ N/A

20. OTHER RECORDS/COMPLIANCE INFORMATION

21. Copies of facility map or diagram made? ☑ YES ☐ NO ☐ N/A

22. Additional Notes:

Activity #: _____ Page ___ of ___

RESULTS OF DISCUSSIONS WITH COMPLIANCE OFFICER AND SPECIFIC INSTRUCTIONS

23. E B said to conduct a routine CEI

10-4

Activity #: _____

24. ADDITIONAL PRE-INSPECTION ITEMS TO CHECK

General Equipment:
- hardhat
- safety glasses
- other camera
- calculator
- dictaphone
- post-its
- coveralls
- film
- pH paper
- rubber boots
- tape measure
- notebook
- compass
- tape recorder
- safety gloves
- safety boots
- ice chest
- batteries
- safety shoes
- SLR camera
- flashlight
- binoculars
- pens/markers
- winter gloves
- ear plugs
- coat
- respirator

Special Equipment?: _____

Paperwork:
- facility files
- NOV forms
- Pollution Prevention forms
- Data Collection Worksheets
- Reference Information
- CBI forms
- Notification forms
- Multi-Media forms (Air, Water, SPCC, Title III)
- Regulations (Federal/State)

- Load Camera
- Credentials
- Business Cards
- Daily Planner
- Car Book/Keys/Credit Card
- Special Health or Safety Considerations?
- Change Phone Message/Setting
- Sign-out On Board

Notes: _____

10-5

Activity #:_____ Page___ of__

DRIVE-BY WORKSHEET

1. Arrival time: 9:00 am

2. Drive-by conducted from public right-of-way? ☑ YES ☐ NO (as much as possible)

3. Determine the direction "North" with respect to the facility and provide a brief sketch of the layout and orientation (as can be viewed from the public right-of-

4. Obvious concerns visible from public right-of-way? ☐ YES ☑ NO
(Note area(s) of concern)

☐ Containers	☐ Tanks	☐ Processing Equipment
☐ Loading Areas	☐ Unloading Areas	☐ Security Devices
☐ Open Drums	☐ Stressed Vegetation	☐ Unusual Staining
☐ Unusual Odors	☐ Obvious Discharges	☐ Improper Disposal
☐ Safety Concerns	☐ Other Concerns	

5. Notes/Observations: _____

5. Photo's Taken? ☐ YES ☑ NO Photo Numbers: _____
(note location/direction on sketch)

DOCUMENTATION: ***HOW*** are the facts known? ***WHO*** said what? ***WHEN*** did it happen? ***HOW*** long did it happen? and ***WHAT PROOF WAS OBTAINED?***

10-6

Activity #: ________

Page___ of__

SITE ENTRY AND INBRIEFING WORKSHEET

1. Initial entry procedures:

   ☑ Used main entrance   ☑ Entered during normal operating hours

2. Facility Representative(s): Bryan Kury — Title: Mgr Env. & Haz Mat. Services
   Angela Pierce — Title: Group Mgr (Air) EHMS
   Joseph Haake — Title: Group Mgr Waste mgmt EHMS
   Stephen Hecht Env. Scientist EHMS

3. Does the facility representative(s) have intimate knowledge of all aspects of the wast generation and management practices? ☑ YES ☐ NO
   (How was this verified?) J. H. & B.K. said they know

4. How long has facility representative worked in their position? not determined

5. Were unreasonable or excessive delays encountered (>15 minutes): ☐ YES ☑ NO

6. Introduction:

   ☑ Presented credentials

   ☑ Verified presence at correct facility (checked address/I.D. #)

   ☑ Explained authority to conduct inspection (Section 3007 of RCRA)

   ☑ Explained the purpose, scope, and order of the inspection

   ☑ Explained documentation process through the use of worksheets, checklists, photo's, notes, statements, etc.

   ☑ Explained EPA's need to collect and the facilities responsibility to provide accurate information and provided copies of Section 1001 and 1002 U.S.C. to facility

   ☑ Explained facility's right to claim CBI and ~~provided pages 1 and 2 of CBI form for signatures~~ Anu

   ☑ Identified personal safety considerations: Safety-glasses

   ☑ Explained that findings and observations are based on your current knowledge of RCRA and that the final findings may differ

7. Was full access granted? ☑ YES By who? (name): Bryan Kury

   ☐ NO Obtain name of person denying access, time of denial, reason for denial, or note limitations placed on access: ________

DOCUMENTATION: ***HOW*** are the facts known? ***WHO*** said what? ***WHEN*** did it happen? ***HOW*** long did it happen? and ***WHAT PROOF WAS OBTAINED?***

Activity #: _____ Page ___ of ___

FACILITY BACKGROUND WORKSHEET

1. Site history:

Date facility began operating: ≈1945 Number of employees: ≈5,765

Number of shifts/hours worked: Full 1st less 2nd shift, 3rd Number of days worked per week: 5 dys

Size (sq. ft., how divided): tot bldg ft² 3,997,326 : 3,244,369 owned by Boeing 748,716 owned by Navy = 3.5 x 4 (1,000 ft²) total ft² property

Property owner and facility operator the same? ☐ YES ☐ NO

MD is a wholly owned subsidiary of Boeing. Navy owns part of property all operations are MD

2. Major products or services provided: mfg fighter aircraft, machining, composit, assembly painting (booths)

3. Major raw materials used: solvents used are; methyl ethyl ketone, methyl propyl ketone & some 1,1,1 trichloroethane

4. Major manufacturing or processing operations which generate waste streams: (provide brief description) w/respect to hzg. wst containing VOC's:

Operation	Waste Stream(s)
painting	cleaning solvent/waste paint
	spent ppe
	spent filters
parts cleaning	spent wipes
compositing	spent wipes

5. Complete a Generator Waste Stream Worksheet and/or Off-Site Waste Stream Worksheet for the waste streams noted above and then finish this form.

Activity #: _____ Page ___ of ___

6. Verified/compared above information with facility Notification Form: ☑ YES ☐ NO

J. Hoake said the waste codes look current

7. GENERATOR STATUS: ☐ CE (0-100kg/mo) ☐ SQG (100-1000kg/mo) ☑ LQG (>1000kg/mo)
(based on records review)

Is facility's status solidly within above category? ☐ YES ☐ NO
(If not carefully verify status and document)

8. TSD STATUS: ☐ Treatment ☐ Storage ☐ Disposal

Note: Types of units, number of units, capacities, processes, etc.

9. Resolved questions from Pre-Inspection Worksheet? ☐ YES ☐ NO ☑ No Questions

10. Resolved compliance officers questions from Pre-Inspection Worksheet? ☐ YES ☐ NO ☑ No Questions

11. Requested site map or diagram to identify all observations? ☑ YES ☐ None available

DOCUMENTATION:	*HOW* are the facts known? *WHO* said what? *WHEN* did it happen? *HOW* long did it happen? and *WHAT PROOF WAS OBTAINED?*

10-9

23. B.K. said no haz waste treatment

B.K. said no haz waste - tanks only containers

5. Hoake said 2-yd³ containers are used to accumulate solvent contaminated debris, then put the debris into one of 2 40-yd³ roll-off containers. Both 40-yd³ rolloffs have an attached hydraulic compactors. 5. Hoake said the hydraulic compactors have gasketed seams.

B.K. said liquid haz waste as VOC's is stored in drums - meeting DOT specs.

Activity #: _____ Facility Status: ☐ SQG ☑ LQG ☑ I.S./P Page ___ of ___

VISUAL REVIEW WORKSHEET AND CHECKLIST

A. CONTAINER STORAGE AREA

(Complete one form per storage area)

1. Name and location of area: permitted storage area

2. Person responsible for area: _____

3. Type of storage area: ☐ < 90 day ☐ < 180 day ☐ < 270 day ☐ I.S. ☑ Permit

4. I.S. capacity: Permited capacity:

#	√/x	REGULATORY REQUIREMENTS*	COMMENTS
5.	√	Date of accumulation marked-262.34(a)(2)	
6.	√	Containers marked as "Hazardous Waste"-	
7.	√	Containers in good condition-262.34-265.171	
8.	√	Containers are compatible with waste-262.34-265.172	
9.	√	Containers kept closed-262.34-265.173(a)	
10.	√	Containers opened, handled, & stored in a manner not to cause them to leak-262.34-265.173(a)	
11.	√	Containers storing incompatible separated or protected form each other-262.34-265.177	
12.	√	Containers stored >50 feet from property line (LQG's, I.S. & Permit, only)-262.34-265.176	
13.	√	Adequate aisle space for type of container management and emergency equipment used-265.35	
14.	√	Containers stored for less than 90/180/270 days, as applicable-262.34	
15.	√	Facility inspected weekly-265.174	
		ADDITIONAL I.S. REQUIREMENTS*	
16.	√	Security: controlled entry, 24-hr. surveillance, or barrier-265.14(b)	
17.	√	"Danger Unauthorized Personnel Keep Out," signs posted-265.14(c)	
18.		"No Smoking" signs conspicuously posted-265.17(a)	
19.	√	Containers/Tanks clearly marked identifying their contents & with storage start date-268.50(a)(2)	
20.	√	LDR wastes not stored over 1 yr. without adequate justification-268.50(c)	
21.		Daily inspections loading.unloading areas (when in use)-265.15(a)(4)	
		PRE-TRANSPORT REQUIREMENTS*	
22.		Waste packaged, labeled, marked, per DOT-262.30, 262.31, 262.32, respectively	
23.		Placards available for use by transporters-262.33	

√-in compliance X-not in compliance N/A-not applicable * - please note applicable permit requirement

10-11

Activity #:_____ Facility Status: ☐ SQG ☑ LQG ☑ T.S./P Page___ o:

#	√/x	REGULATORY REQUIREMENTS*	COMMENTS
24.	✓	Device available capable of summoning emergency assistance-265.34	
25.	✓	Adequate supply and proper spill control, decontamination and safety equipment (fire blankets, respirators, absorbent, etc.)-265.32	
26.	✓	Adequate water supply for fire control equipment-265.32(d)	
27.	✓	Communication and emergency equipment tested and maintained-265.33	
28.	✓	Facility operated and maintained to minimize possibility of emergency-265.31	
29.	N/A	Emergency coordinator's name and phone number, fire departments phone number, and the location of fire extinguishers and spill control equipment posted near phone (SQG only)-262.34(d)	

√-in compliance X-not in compliance N/A-not applicable * - please note applicable permit requirement

30. Container inventory: ☐ Actual count ☐ Approximate count

Waste Type	Container Size		Tot.
Not counted	___ x 55 gal.	___ x 30 gal. _____	___
_____	___ x 55 gal.	___ x 30 gal. _____	___
_____	___ x 55 gal.	___ x 30 gal. _____	___
_____	___ x 55 gal.	___ x 30 gal. _____	___
_____	___ x 55 gal.	___ x 30 gal. _____	___
_____	___ x 55 gal.	___ x 30 gal. _____	___
_____	___ x 55 gal.	___ x 30 gal. _____	___

Total Quantity (pounds, gallons, etc.):_____

31. Total number of containers inspected: all

32. How were container volumes verified?_____

33. Photos taken to verify observations: ☐ YES ☑ NO Numbers:_____

34. Container management area location noted on map or diagram: ☐ YES ☑ NO

35. Notes Observations:_____

DOCUMENTATION: *HOW are the facts known? WHO said what? WHEN did it happen? HOW long did it happen? and WHAT PROOF WAS OBTAINED?*

10-12

AIR EMISSIONS-SUBPART AA, BB and CC CHECKLIST

Subpart AA

Background: If a facility (TSD or LQG) manages hazardous wastes greater than 10 ppmw of organics in a process vent used in distillation, fractionation, solvent extraction, thin-film evaporation, air or steam stripping, Subpart AA may apply. Subpart AA would not apply in a bona-fide closed loop scenario at LQGs and TSDs. To comply, the facility would need to determine if the process vent(s) releases greater than 3.0 lbs/hr and 3.1 tons/year of organic air emissions to the atmosphere.. If it does not release that much then the facility is in compliance with Subpart AA. If its emissions are greater, then a control device is necessary to bring the facility into compliance. The control device may be a condenser, flare, carbon absorber, etc... that brings the equipment's emission rate below the 3.0 lbs/hr **and** 3.1 tons/year, **or** reduces the organic emissions by 95 %.

Objective: The Inspector should try to determine if Subpart AA applies at a particular facility and, if applicable, evaluate the facility's efforts to achieve compliance. Has the facility calculated or measured the organic emissions from all vents and compared that with the emissions limit?

1.(a) Is this facility a Large Quantity Generator ____ Interim Status TSD____or Permitted TSD__✓__ **If NO, do not continue with the RCRA Air Emissions checklists.**

2.(a) Does the facility have any hazardous waste management unit using the following processes: distillation, fractionation, thin-film evaporation, solvent extraction, air stripping and steam stripping? ___✓___ YES ____ NO. **If NO, then proceed to the Subpart BB checklist.**

If YES, list each process vent that is associated to one of the processes.

_____

_____

_____

_____

(b) Are any of these processes exempt under the closed loop recycle exemption?
___YES___NO

If YES, please explain

_____

10-13

(c) Does the hazardous waste contain greater than 10 ppmw organics? ____ YES ____NO.

(d) For those process vents with a yes answer to 2(c) describe the waste(s), unit(s) and processes.

(e) Identify those process vents with a no answer to 2 (c), and describe the information/ documentation used to make the determination (collect this information and submit to EPA).

3(a) Is the total hourly emission rate of the affected process vents greater than 3 lb/hr? ___YES ____NO

and

(b) Is the facility-wide yearly emission rate greater than 3.1 tons/yr? _____YES _____NO

(c) If the answer to 3(a) or 3(b) is no, describe the calculations done by the company to support this determination (Provide copies of the calculations and associated information and submit it to EPA).

10-14

4.(a) If the answer to 3.(a) or (b) is Yes, did the facility install control devices to reduce the emissions? _____YES _____NO **(ALL TSDS MUST HAVE THE CONTROL DEVICES IN PLACE).**

Explain _____

_____

_____

_____

_____

(b) Do the calculations/analysis seem reasonable? _____YES _____NO

(Are they current? Are facility operating hours (e.g., 8 or 24 hours/day) correct? Have worst case scenarios been considered?)

If NO, explain_____

_____

_____

5.(a) Are control devices inspected and/or monitored at least once each operating day to ensure proper operation? _____YES _____NO

(b) Is there any indication of a problem with the operation of the control devices? ____YES _____NO

(c) In case of problems, were corrective measures implemented immediately? ____YES _____NO

IF THE FACILITY IS SUBJECT TO THE SUBPART AA RULE AND IS USING A CONTROL DEVICE, COLLECT THE DESIGN DATA AND MONITORING DATA AND FORWARD TO THE EPA OFFICE FOR REVIEW.

Subpart BB

Background: If a facility (TSD or LQG) has equipment (any valve, pump,compressor, pressure relief device, sampling connection system, flange, open-ended valve or line) that contacts hazardous wastes greater than 10 percent organics, that facility is subject to the inspection and monitoring requirements of Subpart BB. If the equipment used to transport hazardous waste with greater than 10 percent organics is used for less than 300 hours per

10-15

year, then the facility is excluded from the requirements of 264/265.1052 through 264/265.1060 of this subpart if the equipment is identified as required in 264/265.1064(g)(6).

Objective: The Inspector should try to determine if Subpart BB applies at a particular facility and, if applicable, evaluate the facility's Leak Detection and Repair (LDAR) program. Does it cover all the effected equipment, what is its frequency (monthly, quarterly) and are there records of timely (<15 days) equipment repair when leaks are detected. The importance of compliance with Subpart BB is a function of the amount and volatility of a facility's waste.

6. Does the facility have any valves, flanges, or pumps that contain or contact hazardous wastes greater than 10 percent organics? ____YES ✓ NO

7. Does the facility have any compressors, pressure relief devices, sampling connection systems, flanged pipe open-ended valve or line that contain or contact hazardous wastes greater than 10 percent organics? ____YES ✓ NO

8. Is the facility claiming the < 300 hours exemption_____YES ✓ NO

9. If any of the answers to Questions 6, 7& 8 is yes, does the facility have a list of each piece of equipment that is subject to Subpart BB. (Note: facility should have a list in their operating record, ask for copy).

10. Has the equipment been marked as required by Subpart BB Regulations?___YES___NO

11. If the answer to questions 6 or 7 is no, does the facility have information/documentation to support its determination (provide a copy of this documentation to EPA).

12. Has the facility implemented a LDAR program?____YES _____NO

Describe the program: LDAR program pertains to subpart CC containers & annual monitoring & follow-up on any detected "leaks"

10-16

FOR PUMPS AND VALVES IN LIGHT LIQUID OR GAS/VAPOR SERVICE

LIGHT LIQUID SERVICE: For a hazardous waste to be in light liquid service, the vapor pressure of one or more of the organic constituents in the material must be greater than 0.3 Kilopascals at 20 degrees C and the total concentration of pure organic constituents having a vapor pressure greater than 0.3 kilopascals at 20 degrees Centigrade is equal to or greater than 20 percent by weight.

13. Is each pump in light liquid monitored monthly to detect leaks? N/A _____YES _____NO

14. Is each pump in light liquid service checked by visual inspection each calendar week for indications of liquids dripping from the pump seal? N/A _____YES _____NO

15. Is each valve in light liquid service or gas/vapor service monitored monthly for leaks? N/A _____YES _____NO

EQUIPMENT IN HEAVY LIQUID SERVICE

16. Are pumps, valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service and flanges and other connectors in light or heavy liquid service monitored for leaks by visual, olfactory, or any other detection method? N/A ____YES____NO

SUBPART CC OVERVIEW

The Subpart CC regulations apply to Large Quantity Generators and Treatment, Storage and/Disposal Facilities that manage Hazardous Waste of Volatile Organic Concentration of 500ppmw or more on an average annual basis in Tanks and Containers.

For Tank Storage, there are two levels that a facility may use to manage their waste. Tank Level 1 requires a fixed roof tank which uses a maximum organic vapor pressure to comply with Subpart CC. Tank Level 2 designs can be one of five options. These are: (1)an Internal Floating Roof (2)an External Floating Roof (3) a tank with a Fixed Roof vented through a closed vent system to a control device (4) a Pressure Tank (5) a tank located inside an enclosure that is vented through a closed vent system to an enclosed combustion device.

Most of the facilities will comply with Tank Level 1 which is the easiest to follow. The other option that will be seen a lot would be Tank level 2 Option 3. The other options will be

10-17

limited to a small number of facilities and should be referred to EPA for inspection. As a result, the emphasis of this checklist has been these two options.

For Container Storage, most of the facilities will store their waste in DOT approved containers. RCRA regulations already cover such storage and as a result, most facilities will be in compliance with the container storage regulations of the Subpart CC regulations.

This checklist does not deal with Surface Impoundments because there are so few active.

RCRA SUBPART CC CHECKLIST FOR AIR EMISSIONS AT LQGS AND TSDS

1.(a) Is this facility a TSD or a Large Quantity Generator (LQG)? ✓ YES _____ NO
If the answer is no, **STOP**, Air Emissions-Subpart CC regulations do not apply.

2.(a) Are there any units at the facility subject to the CC Rule? ✓ YES _____ NO

(b) If the answer is no, what is the reason? Ref. 40 CFR 265.1080(b) (264.1080(b) exceptions or 265.1083(c) (264.1082(c)) exemptions, or the general exclusions in 265.1(g) (264.1(g)), as applicable.

40 CFR 1080(b)exemptions

(1) Unit did not receive HW after 12/6/96 ____
(2) Using containers of less than 26 gallons capacity ____
(3) Unit undergoing closure ____
(4) Units used in an on-site RCRA or CERCLA clean-up ____
(5) Mixed Radioactive and hazardous waste____
(6) Units with CAA, NESHAPS or NSPS controls ____
(7) Tanks with process vents (Subject to Subpart AA) ____

40 CFR 265.1083(c) exemptions:

(8) Waste stream less than 500 ppmw average VOC ____
If so, was waste determination done per 265.1084?____YES ____NO
(9) All waste placed in unit meets 268.40 (LDR) limits____
(10) Tank is used for bulk feed to incinerator **and**
requirements of 265.1083(5)(i)-(iii) are met _____

40 CFR 265.1 general exclusions/exemptions:

(11) Hazardous waste recycling unit exemption ____
(12) Satelite accumulation area ____
(13) Totally enclosed treatment facility exemption ____
(14) Elementary neutralization unit(corrosive) ____
(15) Waste water treatment in tanks exemption ____
(16) Emergency or spill management exemption ____
(17) Biological treatment with 95 % efficiency ____

Except If exemption is based on (8) above, then **STOP**, subpart CC does not apply.

3. Is the average volatile organic concentration of each waste management unit more than 500 ppmw determined on an average annual basis at point of waste origination? ✓YES ____NO

If YES, does the facility have a list each unit and the concentration in its operating record ? ✓YES ____NO. If NO, indicate if the determination for each unit is in the facility operating record? The determination is based upon operators knowledge. J. H. said they consider the containers to be in light liquid service & have a VOC concentration < 500 ppmw.

NOTE : *IF FACILITY CLAIMS THAT ITS WASTE IS BELOW 500PPM, THEN THE WASTE DETERMINATION DOCUMENTATION SHOULD BE IN THE OPERATING RECORD.INSPECTOR SHOULD REVIEW THIS DOCUMENTATION AND SUBMIT IT TO EPA*

FOR EACH UNIT, FOR WHICH A DETERMINATION HAS BEEN MADE THAT THE HAZARDOUS WASTE CONTAINS LESS THAN 500 PPM OF VOCS, ANSWER THE FOLLOWING QUESTIONS.

4. How was waste determination done? Using Knowledge or Sampling? _____ Ref 40 CFR 265.1084 (264.1083)

(a) If Knowledge was used, is there any documentation on file? _____YES _____NO

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(b) Is it adequate? _____Yes ____No

(c) If sampling was used, does the facility have a written sampling plan? _____YES ____NO

(d)(i) If facility used sampling, was the sampling done by an EPA approved method? ____YES _____NO. Which Method? _____

(e) Has the waste stream changed since the initial waste determination was done which would cause the character of the waste to change or to exceed the threshold levels for applicability of Subpart CC? ____YES ___NO

(f) If so, was a new waste determination done? ___Yes ___No
If yes, repeat 4(a)-(e)

N/A

TANKS SUBJECT TO SUBPART CC

5. (a) Is HW having an average VO concentration of more than 500 ppmw placed in a tank with either level 1 or level 2 controls? ____YES ____NO (40 CFR 265.1085(b)(1))

Please note: The fixed roof and its closure devices shall be visually inspected by the owner/operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the roof sections or between the the roof and the tank walls; broken, cracked or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices. An initial inspection should be done before any waste is stored in the tank and at least once annually thereafter.

6. Were the tanks inspected for leaks before waste was placed into the tank?
_____ Yes _____ No. If YES, when was it done? _____

7. During the tank storage of hazardous waste, was an annual inspection done on the tanks described in Question 6? ____Yes ____ No. If YES, when was it done? _____

Indicate options/level for each tank

_____

_____

_____

10-20

For tanks with level 1 control:
Tank must meet 3 conditions for level 1 control:

(1) Waste maximum organic vapor pressure less than cutoff for tank design capacity
(2) No heating to or above temperatures at which vapor pressure is determined
(3) No waste stabilization in tank

Vapor pressure is determined by knowledge or by measurement.

Compliance Status:_____

_____

_____

_____

_____

_____

_____

_____

NOTE: *INSPECTOR SHOULD CHECK FOR VAPOR PRESSURE DETERMINATIONS, COLLECT INFORMATION AND BRING IT BACK TO OFFICE.*

FOR TANKS WITH LEVEL 2/OPTION 3 CONTROLS
OPTION 3- FIXED ROOF TANK VENTING THROUGH A CLOSED VENT SYSTEM, TO A CONTROL DEVICE THAT WOULD DESTROY OR REDUCE AT LEAST 95% OF VAPORS.

(i) Is the fixed roof forming a continuous barrier over the entire surface area of the liquid in the tank? ____YES ____NO

(ii) Are emissions vented to a control device? ____YES ____NO

(iii) Are all openings in the roof not venting to the control device fixed with a closure device?____YES ____NO

(iv) If the vapor pressure underneath the fixed roof cover is less than atmospheric pressure when control device is working, and the closure device is closed, are there any visible cracks, holes, gaps, or other open spaces between cover opening and closure device?

(v) If the vapor pressure below the fixed roof cover is equal to or greater than atmospheric pressure when the control device is working, are the cover and closure device designed to operate at NDE.

(vi) Are the cover and closure devices closed at all times and the vapor headspace vented to a control device except when O/O is

- performing inspections
- performing maintenance or other normal operations
- accessing the tank
- removing accumulated sludge and other residues from the bottom of the tank.

NOTE: *INSPECTOR SHOULD COLLECT MONITORING DATA FROM THE CONTROL DEVICE AND THE DESIGN DATA AND BRING IT BACK TO THE OFFICE FOR REVIEW.* ALL OTHER OPTIONS, REFER TO EPA

CONTAINERS:

LIGHT LIQUID SERVICE: For a hazardous waste to be in light liquid service, the vapor pressure of one or more of the organic constituents in the material must be greater than 0.3 Kilopascals at 20 degrees C and the total concentration of pure organic constituents having a vapor pressure greater than 0.3 kilopascals at 20 degrees Centigrade is equal to or greater than 20 percent by weight.

LEVEL ONE:

- There should be no waste stabilization.
- Containers must be > 0.1 cubic meters (26.4 gal) and < or = to 122 gallons . If the organic waste is not in light liquid service, it can be above 122 gallons.
- **OPTION 1**-Meet DOT standards.
- **OPTION 2**-Use a cover and closure device on the container and ensure that there are no visible gaps in the interior of the container or holes in the covers.
- **OPTION 3**-Use vapor supressing barrier on or above the hazardous waste in the container.

LEVEL TWO:

- There should be no waste stabilization.
- Containers are larger than 0.46 cubic meters (122 gal) and are in light liquid service.
- **OPTION 1**-The container must meet DOT specifications.
- **OPTION 2**-Operates with no detectable emissions from the container under Method 21.
- **OPTION 3**-Demonstrated to be vapor tight within the last twelve months using Method 27.

LEVEL THREE

- Container must be used for waste stabilization.
- Vent vapors from containers and remove or destroy them in a control device.
- Put container in a "Procedure T Enclosure" and, vent vapors, and destroy them in a control device.

8. What level of control is your facility using to comply with the Subpart CC regulations?
   Level One ✓ Level Two ✓ Level Three _____

Is the facility in compliance? _____YES _____NO Give the basis for your determination.
J.H. said 55-gal drums meet Level One, Option One; J.H. said 40-yd³ roll-offs meet Level Two, Option One; J.H. said the 2-yd³ boxes meet Level Two, Option Two. 55-gal drums in permitted storage area appear DOT drums; 40-yd³ roll-off boxes appear to be DOT containers. The 2-yd³ boxes were determined to meet "no detectable emissions" on basis of an April '98 monitoring of a 2-yd³ container like the ones used in the plant. J.H. said this was the basis for saying all the 2-yd³ containers would meet "no detectable emissions". J.H. said they also did monitoring of all boxes in use during June-July '99. J.H. said they used a PID (instrument calibrated to isobutylene)

RF = actual conc. / inst. response

*** NOTE: Most facilities will be in compliance if they are not conducting waste stabilization and if they store their waste in DOT approved 55 gallon drums.**

10-23

INSTRUMENT CALIBRATION RECORD

David A. Whiting
(Calibrator's Name)

motel room
(Location of Calibration)

4/25/00 ~ noon
(Date, Time)

INSTRUMENT MANUFACTURER Foxboro

INSTRUMENT S/N _____

INSTRUMENT MODEL# OVA-108

OVA RESPONSE FACTOR 1 ; calibrated to methane in air

INSTRUMENT ANNUAL CERTIFICATION _____

CALIBRATION GAS EXPIRATION DATE _____

Calibration Log				
Calibration Gas (Type of Gas Used)	Calibration Gas Level	Measured Concentration	Flow Rate	Accuracy Range [(+/-) 10%]
methane in air	9,999 ppm	1%	2 l/m	0

10-24

VOC LEAKING ~~VALVE~~ Container MONITORING RESULTS

McDonnell Douglas Corp. Tract 1
(Facility Name)

St. Louis, MO
(State, City)

4/25/90
(Date)

INSTRUMENT: Manufacturer Foxboro ; **S/N** _____ ; **MODEL#** OVA 1

Name of Process Unit & Area Monitored: 2 yd³ containers (boxes) & 40-yd³ roll-offs		Monitoring Inspector: David N. Whiting			Confirmation Monitoring Individual: _____	
Background Level Measured	**~~Valve~~ ~~Tag Number~~ item**	**Type of Service**	**Leak Definition**	**Maximum Leak Rate**	**Leak Confirmed (Yes/No)**	**Comments/ Observations**
2 ppm	Bldg. #51 40-yd³ roll-off	Light Liquid container	500 ppm	10 ppm at top S.W. corner	No	
2 ppm	box # 017 outside bldg 51	"	"	0	"	
4 ppm	box # 081 in bldg 2	"	500 ppm	100 ppm at ctr. frnt.	"	
3-4 ppm	box # 056 in bldg 2	"	"	300-400 ppm at frnt. corners	"	100 ppm on rt. side
5 ppm	box # 029 in bldg 2	"	"	100 ppm at ctr. frnt	"	75 ppm frnt. lft. side middle; 20 ppm rt. back corner
5 ppm	box # 050 in bldg 2	"	"	100 ppm at ctr. frnt & rt. frnt corner	"	50 ppm at lft. frnt. corner
5 ppm	box # 049 in bldg 2	"	"	50 ppm at ctr. frnt.	"	
5 ppm	box # 047 in bldg 2	"	"	250 ppm at ctr. frnt.	"	200 ppm rt. frnt. corner 40 ppm lft. frnt. corner
5 ppm	Bldg # 27 40-yd³ roll-off	"	"	0	"	
4 ppm	box # 076 in bldg 27	"	"	100 ppm at ctr. frnt	"	100 ppm at rt. & lft. front
2 ppm	box # 054 outside bldg 29a	"	"	1000 ppm at ctr. back	"	
3 ppm	box # 088 in bldg 29a	"	"	3,000 ppm at rt. side middle	Yes	2,500 ppm at ctr. back 1,000 ppm at ctr. front 20 ppm lft. frnt. corner
3-5 ppm	permitted storage area	Light liquid containers	"	0	No	
TOTAL						

Confirmation Monitoring: none

INSTRUMENT: Manufacturer _____ ; **S/N** _____ ; **MODEL#** _____

10-25

Activity #: _____ Facility Status: ☐ SQG ☑ LQG ☑ I.S./P Page ___ of ___

EXIT BRIEFING WORKSHEET

1. Initial procedures:

☑ Reviewed all data collection worksheets, checklists, field notes, and collected documents to ensure that all necessary information has been collected and documented. This review included the following:

- Documentation of the location of the violation, the type and amount of waste involved, the duration or time frame of the violation, the specific dates when the violation first started occurring, and the number of times or frequency that the same violation was found at the facility.

- Documentation regarding illegal waste management units, including: information about the units location (diagram/picture), its dimensions, its conditions, the construction material, the gradient of the base (for spills), and all other relevant information.

- Documentation regarding illegal disposal situations, including: information about each occurrence, eg. where the waste was sent or disposed of, how it was shipped, who shipped it, when it was shipped or disposed of, how much was shipped or disposed of, how the waste was managed at the disposal site (land disposed, burned, etc.).

☐ Identified/verified violations from previous inspection were corrected (if applicable)

Note additional information needed and/or questions for facility representative(s):

_____

_____

_____

_____

☒ Prepared Notice of Violation (NOV) form, if applicable

☑ Prepared Document Receipt form

☒ Pollution Prevention Checklist completed

☑ Multi-Media screening completed, media(s): RT MM

2. Exit Briefing:

☑ Addressed all unresolved inspection related issues

☑ Provided facility with Document Receipt

☑ Provided facility with ~~Page 3 of~~ CBI form (~~only if facility makes a CBI claim~~) No claim made at inspection. pmw

pmw

☑ Explained that the findings and observations resulting from the inspection were based on your current knowledge of RCRA and that the final findings may differ

☑ Explained that the compliance officer will make the final compliance decisions regarding the findings and observations of the inspection and that all compliance related questions should be directed toward them

☑ Explained that any recommendations provided during the inspection are for informational purposes only and ***DO NOT*** require specific actions by the facility

☑ Summarized the findings and observations for the facility representatives

Notes _____

_____

10-26

Activity #: _____ Facility Status: ☐ SQG ☑ LQG ☑ I.S./P Page___ of__

3. Notice of Violation prepared and issued? ☐ YES ☑ NO (If yes complete below)

☐ All violations were clearly identified and explained, including: the circumstances, location, and the applicable regulations

☐ Explained the importance of a timely and adequate response

4. Specific information requested from facility? ☐ YES ☑ No
(Note: Request all information in writing and copy)

List information to be submitted to EPA: _____

5. Actions facility representatives said they would take as a result of the inspection: (Note who made these statements) ☐ YES ☐ NO

J. Hauke said they would probably remove box #088 from service until repaired

6. Facility appears to have awareness of RCRA regulations and/or has its own environmental staff? ☑ YES ☐ NO

7. Facility appears to have little to no knowledge of RCRA? ☐ YES ☐ NO

8. Facility has copy of applicable regulations? ☑ YES ☐ NO

9. Note attitude and demeanor of facility representative(s) if applicable: ☑ N/A

DOCUMENTATION: ***HOW*** are the facts known? ***WHO*** said what? ***WHEN*** did it happen? ***HOW*** long did it happen? and ***WHAT ?PROOF WAS OBTAINED?***

10-27